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Wright State University College of Engineering and Computer Science

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BITS & PCs

COLLEGE OF ENGINEERING AND COMPUTER SCIENCE

June 1997

Wright State University Dayton, Ohio 45435

Vol. 13 No. 6

Outstanding Graduating Seniors Honored

Every Spring Quarter, the departments of the College of Engineering and Computer Science select one outstanding graduating senior from each academic program. These students are among those being honored at our annual Recognition and Awards Ceremony (see below). Here are the outstanding graduating seniors for 1996-97.

Steve Poelzing—Biomedical Engineering. Steve's many honors include election and service as vice-president of the WSU student body and vice-president of the WSU Chapter of Tau Beta Pi, the

national Engineering honor society. While maintaining top grades, Steve has worked tirelessly for five years to advance the interests of students in the College.

Andrew J. Lynch—Computer Science. Andrew has been a consummate student, he has maintained a 4.0 gpa while pursuing his B.S. in computer science and has previously earned a B.S. in Electrical Engineering from North Dakota State University in 1989 and an M.S. in Electrical Engineering from Wright State University in 1991. Andrew is currently employed at Wright-Patterson Air Force Base, is a

continued on Page 2

Dates to Remember!

June 7	— Last day of Spring Classes
June 9-14	— Finals Week
June 13	— Recognition / Awards Ceremony & Order of the Engineer Ring Ceremony
June 14	— Commencement
June 16	— Summer A & C Classes Begin
July 21	— Summer B Classes Begin

College of Engineering and Computer Science Annual Recognition and Awards Ceremony

Friday, June 13, 1997

5:00 P.M.

Student Union Multipurpose Room

*Join us as we honor outstanding students,
faculty, staff, and friends.*

Reception immediately following the ceremony.

*Don't forget to RSVP to 775-5001
or E-mail dean_ecs@cs.wright.edu.*

What's Inside?

Design Clinic	2
Employment Opportunities	3
Outstanding Faculty Awards	6
SETP Symposium	7
President's Excellence Award	7

DESIGN

CLINIC

The College of Engineering and Computer Science developed a Design Clinic Program to provide our undergraduate students with real-world industry consulting experience.

Design Clinic participants receive design course and/or technical elective credit in their program of study. Participation also enhances employment opportunities upon graduation by providing relevant industry experience, faculty and industry references, technical team experience, and knowledge about possible availability of positions in their sponsor company.

To participate in the program, students must work as part of a team for three consecutive quarters, starting in fall 1997, on an industry-sponsored project. Students will enroll for four credit hours each quarter (fall '97, winter '98, spring '98) for a total of 12 credit hours.

Teams will have two advisors—one from the faculty and one from the sponsoring company.

Participants must meet the following minimum requirements:

- ♦ 140 credit hours completed in program of study prior to the start of fall quarter or plans to graduate prior to June 1999
- ♦ Cannot be graduating before June 1998
- ♦ GPA of at least 2.5

We anticipate having about 12 design projects which will require about 48 participating students.

Students wishing to participate in Design Clinic may obtain an application form in the College office, 405 Russ. For more information, contact your department chair or Dean Brandeberry.

Outstanding Graduating Seniors—Continued

licensed Professional Engineer in Ohio, and owns a small business specializing in small computers and networks.

David T. Miller—Computer Engineering. David is also an accomplished student who has maintained a 4.0 gpa and has previously received a B.S. in Electrical Engineering from The Ohio State University. He is a member of Eta Kappa Nu and Tau Beta Pi.

Geeta Pujara—Electrical Engineering. Geeta's achievements include President of the WSU Chapter of Tau Beta Pi and co-President of the Asian Students Association. She also serves as treasurer of the WSU student chapter of IEEE, the electrical engineering professional organization. As a junior, Geeta earned the Heritage Scholarship, the top award by the University Honors program.

Gregg Jessen—Engineering Physics. Gregg has exhibited great potential during his years at Wright State as evidenced by his outstanding grades. Recently, he was a member of Dr. William McCormick's design team which furthered the development of a laser beam receiver used in controlling earth moving equipment.

Amy Schmachers—Human Factors Engineering. Amy's accomplishments at Wright State include participation in the Engineering Leadership Institute and induction into Tau Beta Pi. While pursuing her academic goals, Amy worked for Copeland Corporation and completed a senior design project at Wright Laboratories, WPAFB. She will graduate with General Studies, Departmental, and University Honors.

Robert Fecke—Materials Science and Engineering. Robert's

performance, academically and in student activities, has been truly exceptional. His professors have stated that he is talented, creative, hard-working, and exhibits great potential for professional growth. While pursuing his educational goals, Robert worked as an aid at the Wright Laboratory Materials Lab, WPAFB, and served as President of the WSU student chapter of ASM/TMS.

Roy McCarthy—Mechanical Engineering. Roy began his studies in mechanical engineering after obtaining a broad range of work experience. During this past year, he was a member of an award winning senior design project under the advisory of Dr. Mitch Wolff. Roy's exceptional ability to work with others and skill in problem solving contributed a great deal to the success of his design team.

Congratulations to each of you!

EMPLOYMENT OPPORTUNITIES

Armstrong Laboratory at Wright-Patterson Air Force Base has an opening for an electrical engineer. Candidates must have a B.S. in electrical engineering (M.S. is preferred) with experience in PC hardware communications; Matlab, C or C++ programming experience; understanding of basic digital signal processing concepts (Nyquist frequency, FFT, stochastics, etc.); and familiarity with Unix, bioamplification, Windows NT, Windows 95, Windows 3.1, and MS-DOS.

This position involves application of signal processing techniques to digitize, pre-process and analyze ECG, EOG, respiration, and EEG measures; development of programs in Matlab and C++; maintaining and acquiring all hardware including PC's, bioamplifiers, and physiological measurement devices used in the Flight Psychophysiology Laboratory. Experience with neural networks and biomedical systems and the ability to learn quickly are extremely desirable. Knowledge of research design, methods, and multivariate statistics are also beneficial.

For further information about this position, contact Dr. Glenn Wilson at 937/255-8748 or Carolyne Swain at 937/255-8758. To apply, contact Pat Wabler, Logicon Technical Services Inc. at 937/255-4815.

The U.S. Coast Guard in Washington, DC, has an opening for a General Engineer. This position entails developing and implementing changes to Coast Guard marine engineering safety regulations, policies and procedures to increase emphasis on Human Organizational Factors (HOF) principles within the Coast Guard marine safety and environmental protection program. Some travel, both domestic and international, is required.

Qualified applicants must show that they possess knowledge of professional engineering principles, methods, and procedures. Applicants must also have completed a Ph.D. or at least 54 semester hours toward a Ph.D. in human factors engineering or a related field, or have at least 1 year of related experience. Applicants must also be familiar with the concepts and principles of human and organizational factors or human factors engineering.

For more information or to obtain procedures for application, call 912/757-3000 or write to:

U.S. Office of Personnel
Management
Raleigh Service Center
4407 Bland Road
Suite 20
Raleigh, NC 27609

GEO-CENTERS, INC., a high-technology, growth-oriented research and development company, has opportunities for Human Factors Engineers at their Natick, MA, location. Qualified applicants must have at least a B.S. in Human Factors Engineering, Industrial Engineering, Cognitive Psychology, or related discipline, with five or more years of specialized experience.

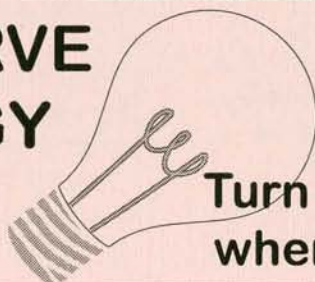
Successful applicants must have experience in human factors and ergonomic evaluations, human performance measurement, research design, questionnaire development, statistical analyses,

BITS & PCs is a monthly newsletter published by the College of Engineering and Computer Science to inform students about activities, news, opportunities and changes occurring in the College. It reports on the achievements of faculty and students; changes in organization, policy and curriculum; scholarship and employment opportunities; and engineering and computer science student club activities.

The current issue of *BITS & PCs* is available on the World Wide Web at <http://www.cs.wright.edu/info/bits&pcs.html>. There are also links to past on-line issues and the College home page at <http://www.cs.wright.edu/>. Copies are also available in the College office, any Department office, or the Student Club Room.

The next issue will be published the week of September 1, 1997. To submit items for this issue, please phone the College of Engineering and Computer Science, 405 Russ Engineering Center, at 937/775-5001, or E-Mail kthis@cs.wright.edu by August 22, 1997.

CONSERVE ENERGY



**Turn off the juice
when not in use!**

EMPLOYMENT OPPORTUNITIES

and technical report preparation. Excellent written and oral communication skills are essential.

Responsibilities will include providing Human Factors/Cognitive Science expertise to engineers and scientists engaged in the research, development, and engineering of commercial and military products such as clothing and individual equipment, food and food service equipment, shelters, tents, and airdrop equipment.

GEO-CENTERS, INC., offers competitive salaries and benefits. Qualified candidates should forward a resume and salary history to:

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Department
P.O. Box 428
Newton Upper Falls, MA 02164
FAX: 617/527-7592

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F-O-R-T-U-N-E Personnel

Consultants is seeking to fill a process and training engineer position in the greater Dayton area with forward-looking, highly self-motivated individuals. Candidates should have a B.S. in mechanical engineering, computer engineering, or industrial engineering and some experience in manufacturing.

National Institute for Occupational Safety and Health (NIOSH), Morgantown, WV, has several opportunities available.

Engineering & Control Technology Branch of the Health Effects Laboratory Division (HELD) needs engineers skilled in laboratory research and mathematical/computer modeling. Candidates should have an M.S. or Ph.D. and experience in laboratory-based research. Experience in occupational or environmental safety and health research is highly desirable for leadership positions. Specific research areas include computational fluid dynamics, fault tree analysis, noise control, hazard control technology, and process modification to reduce hazardous exposure of workers.

Interested individuals should request more information by contacting Nancy Bollinger at 304/285-6121. To apply, send a curriculum vitae with the names of three references to:

NIOSH, HELD/ECTB
MS 4020
1095 Willowdale Rd.
Morgantown, WV 26505

The Protective Technology Branch conducts research for the control and prevention of occupational traumatic injuries through a multidisciplinary program of safety and human factors engineering. Research activities include developing/evaluating engineering solutions for the control and prevention of occupational traumatic injuries; developing computerized

workplace simulations for evaluating worker performance, workplace hazards, proposed hazard controls, and mathematical modeling of hazardous operations; and the development and evaluation of personal protective equipment for the prevention/mitigation of traumatic injuries.

The Protective Technology Branch has immediate openings for:

Safety Engineers—
emphasis on civil,
mechanical, or systems
safety is desired

Mathematical Statistician—
engineering statistics and
experimental design desired

Physical Science Technician—
bachelor level training in
engineering desired

Chemist or Chemical Engineer—
emphasis in protective
equipment and clothing
applications desired

Individuals interested in exploring these challenging opportunities and a future career in the prevention of occupational traumatic injuries are encouraged to seek additional information about or to apply for these positions, by contacting Dr. Hongwei Hsiao, Chief, PTB, 304/285-5910 or Tonya J. Jacquez, Administrative Officer, DSR, 304/285-5904.

NIOSH is an Equal Opportunity Employer. All NIOSH workplaces are smoke-free.

EMPLOYMENT OPPORTUNITIES

Professional Outlook, Inc., Westmont, IL, has the following positions available in Ohio:

Plant Ergonomist—prefer 1-4 years of in-plant ergonomics experience within a manufacturing setting. This position is responsible for all ergonomic issues for a 2,000 employee, non-union plant. Primary duties include providing primary input for the identification and implementation of ergonomic countermeasures in the plant, develop strategies and countermeasures for new product activities, develop and implement plant-specific ergonomic training, lead studies in the plant, and train plant associates. The position reports to an Assistant Manager of Safety and Health.

Corporate Ergonomic Coordinator—prefer 3 or more years' ergonomic experience in a non-manufacturing environment. This position is responsible for coordinating all ergonomic activities for 7,000 employees in 4 plants. Travel is required to local facilities to lead and coordinate ergonomic projects and studies, conduct situation analyses, solve engineering concerns, and train plant associates. This position reports to the Corporate Safety Manager.

Company Ergonomics Leader—prefer 8 or more years of in-plant ergonomic experience in a manufacturing environment. This position coordinates company ergonomic programs and leading in the development of company direction. Duties will include benchmarking ergonomic situations at other companies; developing company ergonomic policies, training programs, and

analytical methods; monitor OSHA ergonomic regulatory developments; and support new product ergonomic activities including review of drawings and designs. This position reports to a Corporate EHS Manager.

For more information or to apply for these opportunities, contact:

Laura Petraitis
Professional Outlook, Inc.
825 N. Cass Avenue, Suite 111
Westmont, IL 60559
Phone: 630/887-1444
FAX: 630/887-1465

Part-Time Part-Time Part-Time

The SOCHE Student Support Program has these positions available at the **Materials Lab at Wright-Patterson Air Force Base:**

Metallic Composites (Project 8): The student will perform microstructural analysis and mechanical properties testing to Ti-Al-Nb alloys and their composites; will determine interface structure and chemistry; measure fiber strength; and interpret and present data as appropriate. This is an ideal opportunity for materials science and mechanical engineering majors.

Computer Control for Tribological Testing (Project 23): The student will implement computer programs and hardware to permit deposition of 3-dimensional

functionally gradient coatings. Testing and analysis of these materials' tribological properties through automated methods is imperative due to tedious testing required to determine material tribological properties such as friction and wear. Automated testing and deposition methods accomplished through computer control will require design and implementation of both hardware and software as well as computer data acquisition and information management. Implementation requires system construction, computer code, and hardware interface engineering. Skill in C++ programming is beneficial. This is an ideal opportunity for computer science majors.

Graphics Display of Computer Simulations (Project 44): The project is to collect, convert, and display data on the structural properties of metals using graphics software such as GKS, PHIGS, or PV-WAVE. The student will participate in the development of the interactive graphics package with the Computations Materials Science group. Computer programming skills/experience is beneficial. This is an ideal opportunity for computer science majors.

All SOCHE positions provide career-related work experience, research opportunities, flexible opportunities, and compensation ranging from \$8.89-\$13.62/hr.). Candidates must be U.S. citizens, sophomore through graduate level, and currently be seeking a degree and in good standing.

1996-97 Outstanding Faculty Awards Announced

Each Spring Quarter, the four departments of the College of Engineering and Computer Science (CECS) submit nominations to the College Faculty Development Committee to identify faculty members excelling in the areas of academics, research, and service. These finalists will also be honored at the Annual Recognition and Awards Ceremony (see front page). This years honorees are:

Dr. Mateen Rizki, CSE—Excellence in Teaching. Dr. Rizki has often been labeled "the best teacher I ever had" by his students. He believes teaching should be an interactive process and avoids

canned lectures and slides in favor of adapting his presentation to the topics and concepts to create a sense of excitement and eagerness in the learning experience.

Dr. Philip Chen, CSE—Excellence in Research. Dr. Chen is a dynamic researcher who has earned the respect of his colleagues and students. He has been published prolifically in the most prestigious professional journals and has been responsible for securing over \$500,000 in research funding which has supported numerous graduate and undergraduate students.

Dr. Lang Hong, EE—Excellence in Research. Dr. Hong's innovative

research has drawn international recognition to himself and to WSU as a quality research institute through his many publications in several distinguished publications. He is responsible for over \$750,000 in research funding which has supported numerous academic activities and graduate students.

Dr. Marian Kazimierczuk, EE—Excellence in Service. Dr. Kazimierczuk's services to the Department, the College, and the University are too numerous to list here. In every instance, he donates his time, skill, and energy with a professional dedication that earns his peers respect and admiration.

Congratulations Faculty!

Ty D. Upp says.

The administration of the Russ Engineering Center enforces a strict "No Posting" policy. Flyers, bulletins, notices, etc. may only be displayed in designated cases throughout the building. They are **NOT** permitted to be affixed to any other wall, door, window, or other such surface.

Daily inspections are made of the Russ Center. Any items found in unauthorized locations will be removed. For information about posting items in the authorized display cases, contact the Dean's Office, 405 Russ, 775-5001.

Thanks for your cooperation.

Ty D. Upp is a regular feature in BITS & PCs. faculty, staff, and students are welcome to submit prospective topics for Ty D. Upp to address in this column. Just contact kthis@delta.cs.wright.edu or stop by the Dean's Office at 405 Russ to submit your suggestions.

Post
~~Don't tread~~
on Me!



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Engineering Center

Bits & PCs

College of Engineering and
Computer Science
Wright State University

Dean

James E. Brandeberry, Ph.D., P.E.

Editor and Staff Writer

Karil S. This

Submit questions, articles and ideas to Editor, 405 Russ Engineering Center. The College of Engineering and Computer Science reserves the right to edit all material for publication.

SETP Symposium Coming to Dayton

The Society of Experimental Test Pilots (SETP), Great Lakes Section, will hold the Great Lakes Symposium on Friday, July 18, 1997, at the Holiday Inn Conference Center at 2800 Presidential Drive, Fairborn, Ohio. This Symposium is being held in conjunction with the United States Air and Trade Show, commemorating the U.S. Air Force 50th Anniversary, and the National Aviation Hall of Fame Enshrinement.

Presentations will involve flight testing of aerospace vehicles and both historical and current aviation developmental programs. Attendance is not restricted to SETP member.

Planned events include:

Thursday, July 17—Arrival and Early Registration. A SETP registration desk will be open from 4-7 PM in the hotel. Registration packets will be available at this time. For those who have not preregistered, tickets will be available for sale.

Thursday, July 17—Cocktail Reception. A cocktail reception to kick off the Symposium has been planned for 7-9 PM at the Holiday Inn. Dress will be civilian informal (business suit). Tickets are \$25 per person and include hors d'oeuvres and an open bar.

Friday, July 18—Technical Session. The first session begins at 9 AM. Registration fee is \$45.00 for students, \$60.00 for SETP members, \$65.00 for affiliated members, and \$70.00 for non-members. A special luncheon with a keynote speaker is included in the registration fee. The luncheon will be served at Noon. Individual luncheon tickets may be purchased for \$20.00.

Preregistration forms may be requested from SETP Headquarters, Post Office Box 986, Lancaster, CA 93584-0986; Telephone 805/942-9574; FAX 805/940-0398; E-mail: setp@netport.com. Questions may be addressed to Lt Col John Armor, USAF (Ret), Symposium Chairman, Telephone 937/429-2651; E-mail: jarmor@aol.com.

Congratulations, Paula!

Paula Price, Senior Secretary, Computer Science and Engineering, will be awarded the President's Award for Excellence in Service on June 3, 1997. Paula has been a valued member of the Computer Science Department and the College for the past six years and she is extremely deserving of this prestigious recognition.



Paula stood out for nomination for this honor by virtue of her positive attitude in all situations, her dedication and professionalism, and her ability to work cooperatively with all segments of the community—students, faculty, staff, administrators, and people from the government and industry.

Once again, congratulations, Paula!



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851 Orchard Lane, Beavercreek, OH 45434

HFE Society Names New Officers

The WSU student chapter of the Human Factors and Ergonomics Society (HFES) would like to extend congratulations and best wishes to the officers of the 1997-98 academic year.

Cody Schaff	—	President
Kelly Treat	—	Vice President
Siv Gouch Ly	—	Secretary
Heath Morton	—	Treasurer

Anyone interested in human factors but not currently a member of HFES is encouraged to contact the new officers for information or meeting dates and time. If you aren't acquainted with one of the officers, leave your name and E-mail address in the HFES mailbox in the Department of Biomedical and Human Factors Engineering, 207 Russ.

ATTENTION HIGH SCHOOL STUDENTS

Visit the Russ Engineering Center

A Showcase of Modern Technology for Academic Study!

The \$20 million **Fritz and Dolores Russ Engineering Center** located on the campus of Wright State University opened in 1992 and features state-of-the-art laboratory and teaching facilities for the College of Engineering and Computer Science.

◆ **Shadowing Program**
October through May

Spend a day on campus with an engineering or computer science student.

◆ **Planning A Vacation?**

Call us for your **FREE** vacation package, which includes a visit to the Russ Engineering Center!

Call Dick Rathbun, Assistant Dean, 937/775-5001, for more information or a personal tour of the Russ Engineering Center.



Wright State University

College of Engineering and Computer Science

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Dayton, Ohio 45435-0001

Office of the Dean